

### John C. Stennis Space Center

Nation's largest rocket engine testing facility



\$840M per year



### Stennis Space Center (SSC) Mission:

- The nation's largest rocket propulsion engine testing facility located near Bay St. Louis, MS
- Supports Applied Science and Coastal Research
- A unique Federal City hosting the NASA Shared Services Center and more than 30 major federal, state, academic and private organizations
- SSC's work falls under the Space Operations Mission Directorate, the Exploration Systems Mission Directorate and the Science Mission Directorate



### Stennis Space Center's Demographics

- Center occupies a total of 125,000 acres (called Buffer Zone) including 13,800 habitable acres (called Fee Area)
- A 7 ½ mile Panama-like canal waterway links the Stennis Space Center Test Complex to the Pearl River in Mississippi and Louisiana with access to Michoud Assembly Facility in New Orleans, Louisiana
- Center employs about 5,000 people onsite
  - NASA/SSC and contractors 1,661 (286 federal civil servants; 1,375 Contractors)
  - NASA/Shared Services Center (NSSC) and contractors 507 (131 federal civil servants; 376 contractors)
  - Department of Defense and contractors 1,597 (1550 Navy; 47 Army)
  - Department of Commerce and contractors 229
  - Other Residents 934



### Rocket Propulsion Test Heritage







Space Shuttle







Constellation







First Saturn V Rocket **Engine Test Firing** April 23, 1966

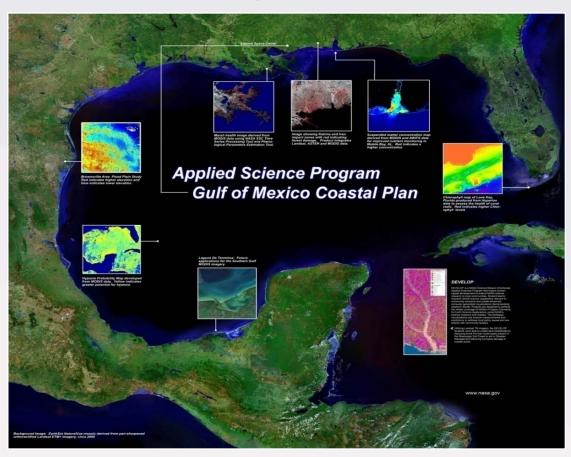
First Space Shuttle Main **Engine Test Firing** May 19, 1975

> First J-2X Engine **Component Test** December 18, 2007

"I don't know yet what method we will use to get to the moon, but I do know that we have to go through Mississippi to get there!" -Dr. Wernher Von Braun



### **Applied Science Program**



### Gulf of Mexico Priorities

- Gulf of Mexico Alliance
  - Led jointly by NOAA & EPA
  - Federal workgroup comprises 13 federal agencies, including NASA
  - Linkage to state & local agencies
- Northern Gulf Institute
  - NOAA-funded collaboration
  - Federal, state, and academic composition



### Resident Agencies at Stennis Space Center

#### **Department of Defense**

- Commander, Naval Meteorology & Oceanography Command
- Naval Oceanographic Office
- · Naval Research Laboratory
- Naval Small Craft Instruction and Technical Training School
- Navy Special Boat Team 22
- Navy Human Resources Service Center Southeast
- Mississippi Army Ammunition Plant
- Defense Contract Management Command

#### **Department of Commerce**

- NOAA, NWS, National Data Buoy Center
- NOAA National Marine Fisheries Service
- NOAA National Coastal Data Development Center

### Environmental Protection Agency

- Environmental Chemistry Laboratory
- Gulf of Mexico Program

#### **Department of Interior**

- USGS Water Resources Division
- USGS Geomagnetism Center



## Department of Transportation

· U.S. Coast Guard

#### **Department of Energy**

 Strategic Petroleum Reserve

#### General Services Administration

#### State of Mississippi

 Mississippi Space Commerce Initiative Geo Resources
 Institute

#### State of Louisiana

 Louisiana Technology Transfer Office

#### Mississippi Enterprise for Technology

 Stennis Technology Enterprise Center

## Institute for Technology Development

Spectral Visions

#### **Commercial Companies**

- Pratt and Whitney Rocketdyne
- Lockheed Martin, Mississippi Space and Technology Center
- Rolls Royce North America

#### **Major Contractors**

- · Pratt and Whitney Rocketdyne
- Jacobs Technology Inc.
- Computer Sciences Corp.
- Applied Geo Technologies
- Paragon Systems Inc.
- Science Applications International Corporation

#### **Center for Higher Learning**

- · Mississippi State University
- University of Southern Mississippi (USM)
- USM Center for Marine Science
- University of New Orleans
- Pearl River Community College

#### University of Southern Mississippi - College of Marine Sciences

- Dept. of Marine Science
- Center for Ocean and Atmospheric Modeling

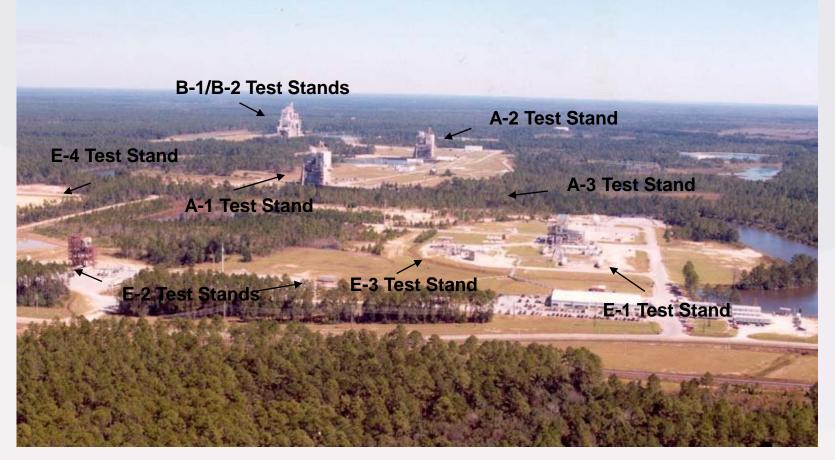


### Mission Directorates/Major Projects supported by SSC

- Space Operations Mission Directorate
  - Space Shuttle Program (SSP)
    - Space Shuttle Main Engine (SSME) Flight Support
    - SSME Transition & Retirement
  - Rocket Propulsion Test (RPT) Level III
    - SSC Test Facilities Preventive/Corrective Maintenance and Support A-2 Test Facility Transition
- Exploration Systems Mission Directorate
  - J-2X Engine Development/Certification Program (Saturn J-2 Derived Engine)
    - A-1 & A-2 Test Facility Repair/Refurbishment for J-2X Engine Testing
    - A-3 Altitude Test Facility under construction
  - ARES I Upper Stage Main Propulsion Test Article development and flight stage acceptance testing
    - B-2 Test Facility Repair/Refurbishment for J-2X upper stage
  - ARES V Core Booster MPTA development and flight stage acceptance testing planned for B-2
- Science Mission Directorate
  - Applied Science & Technology Program
    - Gulf of Mexico Initiative (Coastal Research)
- Commercial Programs
  - RS-68 Engine Test Program at B-1 Test Facility
  - AJ-26 Engine Test Program at E-1 Test Facility

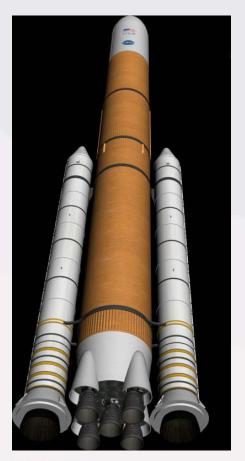


### **SSC Test Stand Layout**





### **Constellation Program**





Stennis Space Center will manage and integrate rocket propulsion testing for the Constellation Program



#### A-3 Test Stand



- 300 feet tall
- Open steel frame structure on 19-acre site
- Up to 1 million pounds of thrust
- Simulates altitudes up to 100,000 feet by generating steam to create a vacuum

The new A-3 Test Stand will allow engineers to test operating parameters of the J-2X engine for the Ares launch vehicles by simulating conditions at different altitudes



### Recurring and Future Contracts

- Recurring (Re-competing) Work
  - Information Technology Services (ITS)(SB Set-aside) RFP issued August 7, 2009;
     Award scheduled during FY10 2<sup>nd</sup> Quarter
  - Laboratory Services (8(a) Competitive for Regions IV and VI) RFP Issued
     October 1, 2009; Award scheduled during FY10 2<sup>nd</sup> Quarter
  - Test Operations Contract Sources Sought Synopsis issued July 2009; release of RFP TBD



### Future (New) Work

Work Description	NAICS Codes	Type Competition	Contract Type	RFP Release Date FY10 Quarter	Contract Award FY10 Quarter
Vessel Transportation Services for 32 Gaseous Nitrogen Vessels	484230	SDVOSB	Fixed Price	1 <sup>st</sup> Quarter	1 <sup>st</sup> Quarter
E-1 Refractory Cement Installation on Flame Trench	327124	TBD	Fixed Price	1 <sup>st</sup> Quarter	3 <sup>rd</sup> Quarter
A-2 LH Piping Installation (E-1 Refractory Cement Installation on Flame Trench)	327124	TBD	Fixed Price	1 <sup>st</sup> Quarter	3 <sup>rd</sup> Quarter
Marine Barge and Tug Repair Services	336611	TBD	Fixed Price	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter
A-3 Test Stand Water and Steam Piping	237110	TBD	Fixed Price IDIQ	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter
AE Design for HPIW Pipe Replacement	541420	TBD	Fixed Price	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter



### Future (New) Work

Work Description	NAICS Codes	Type Competition	Contract Type	RFP Release Date FY10 Quarter	Contract Award FY10 Quarter
Refurbish Test Stand Fire Main Systems	238120	TBD	Fixed Price	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter
Repairs to High and Low Voltage Systems Site-Wide	335999	Small Business Set-aside	Fixed Price	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter
Modifications to Fluid Component Processing Facility	237120	TBD	Fixed Price	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter
High Pressure Gas Facility Air Compressor/Cooling Tower Repair	333912	TBD	Fixed Price	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter
State Highway 607 Expansion	237310	Full & Open Competition	Fixed Price	TBD	TBD



## **Doing Business with Businesses**

### Doing Business with Small Businesses

- Issues and Concerns
  - Acquisition Forecasts Ensuring requirements' organizations fully consider small businesses in acquisition planning through proper market research
  - Small Businesses not properly reviewing synopses and solicitations and not providing adequate capability statements
  - Some construction activities and commodity buys for the construction of the A-3 Altitude Test Stand are not suitable for small businesses
- How our Center feels/deals with Small Business Joint Ventures (JV) and Teaming
  - Encouraged in order for small businesses to gain competitive edges as long as small businesses properly coordinate with SBA
  - Need clear instructions in RFP's for small businesses to provide adequate documentation in proposals evidencing application to SBA for 8(a) JV approval + ensuring JV registers in CCR as separate entity
  - Need clear ostensible subcontracting language in RFP's
  - JV Past Performance Evaluation of previous teaming/JV with proposed partner; evaluation of managing partner



## **Doing Business with Businesses**

### Doing Business with Large Businesses

- Issues and Concerns
  - Changing Federal budget and scope reductions create challenges for large businesses in meeting small business goals
  - Need for more structured outreach to small businesses by large primes
  - Some small business subcontractors do not match prime large business employee benefits and can create workforce issues
  - Some large businesses seem to get and hold the corner on the market
  - Bureaucracy and less flexibility, especially in negotiations



# Center Specific Issues, Initiatives, and Highlights

- Success of Center Industry Day will become an annual event
- Re-start Center small business forum with other on-site Government/Resident Agencies contractors to facilitate training and networking; large prime contractors and small businesses can schedule time to meet and present capabilities
- Initiated Center's own Annual Small Business Awards aligning with the NASA Agency Small Business Industry Awards (SBIA)
- Aggressively targeting new requirements for set-asides in all small business categories
- Out of 34 construction contracts; 28 are small businesses



## **Contact Us**

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